<b>Work Order ID 118983</b> <i>May-06-14 8:08:47 AM</i>				*118	3983*							Page 1
Item ID: Revision ID: Item Name:	D3417-5 Washer			Accept	*N900	<u>0</u> 40	100	)*	Setup	Start Stop		S1* S2*
Start Date: Required Date: Reference:		Qty: 24.00 Qty: 24.00	*24* *24*		Cust Item Customer:	ID:					1.4	. 1/
Approvals:	Process Plan: M	S	Date: 14-05-6	7-Tooling:	D	ate:			Run	Start	^!V	R1*
	QC:		Date:	e: SPC (Y/N):		Date:				Stop	*N	R2*
Sequence ID/ Work Center II	Operat Descrip			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accep Qty	t Re		Reject Number	Insp. Stamp
Draw Nbr	Revision Nb	r				×						
D3417	Rev F											
*100 *100* Doosan Doosan Lathe	Hardinge	CNC LATHE S  Memo  1-Turn as pe  Rev: (A/2)  Dwg D3417	r Folio FA761	0.00				26	»	Ø		14/05/23
; 110	QC2- Ins	2-Deburr	achine FAI/FAIB	0.00								DAS 40
*110* QC Quality Control		Memo		0.00				26	{	<u>Ø</u> _		14/05/23
120	QC8- Ins	pect parts - seco	nd check	0.00								DAC
*120*		Memo		0.00								DAS 25 14-5- 9-89

0.00

Memo

Quality Control

DQA:	Date:									TRAGE			
						WORK ORDER NON-	-CC	ONFO	RMANCE / UPDATE			_	AEROSPACE
QA Closed:			Date:							W	ork Order up	date only	
NA/ and Our						DISPOSITION			AGAIN	NST DE	PARTMENT	PROCESS	
Work Ord	er: .	·	······································			Rework	ı	Skid-tube Crosstub			1	Water Jet	Engineering
Part No.				Scrap			Machining Small F	)	Pro	d. Eng. Coor.	Quality		
Part No.			—	Use-as-is			noforming Finish	<b>⊢</b>	1	e/Packaging	Other		
NCR No.				Suspected Unapproved			Large Fab Compos			Supplier	1		
												· •	
Root					Desc	ription of work order update	Ī	nitial	Action		Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Design						· · · · · · · · · · · · · · · · · · ·						٠	
Doc/Data													
Equip/Tooling	Ш												
Handling/Pre													
Material		:											
Operator													
*Offset/Setup -ق	igwdap												
Process													
Supplier											]		'
Training													
Transport													
Unapproved							EAL	III CA	TEGORY		L.	<u> </u>	
1				· · · · · · · · · · · · · · · · · · ·		General	FA	OLI CA	IEGORT				
Land		Bending			Γ	Bend		Folio/F	Program		Outside Dim	ensions [	Pressure/Forced
		Centre No	nt Concer	ntric	-	BOM/Route	$\vdash$	Grain	10814111		Over/Under	<u> </u>	Set-up
	$\vdash$	Cracks	or concer	itiic	$\vdash$	Broken/Damage/Defect	-	Hardwa	are		Part Incorred	<del>                                      </del>	Temperature/Cure
	$\vdash$	Crimp/Kir	nk/Ripple	/Wave		Burrs	$\vdash$	4	ion Incomplete/Unqualified		Part Lost/Mi	ssing	Weld
		Cuffs	у гирріс	,		Contamination		1	tions Incomplete/Unclear		Part Moved		Wrong Stock Pulled
	Crushing		Countersink		4	gned/off center		Positioned V	Vrong	_			
ě et		Heat Trea	at			Cut Too Short		Mislab			Power Loss/	Surge	Other
-		Inspection		Tube		Drawing		Misrea	d				
	Marks/Chatter		Drill Holes	Off-set									
Turning Sequence			Finish		Out of Calibration					-			
		Wave/Twist in Tube F		Fit/Function	Out of Sequence								

Work Ord May-06-14 8:0		18983		*118983*											
Item ID: Revision ID: Item Name:	D3417-5 Washer			Accept	*N9000	740	100	)* ፡	Setup	Start Stop	*N *N	S1*			
Start Date: Required Date Reference:	5/05/14 :: 5/05/14	Start Qty: 24.00 Req'd Qty: 24.00	*24* *24*		Cust Item ID Customer:	<b>):</b>									
Approvals:	Process Pl	an:	Date:	Tooling: SPC (Y/N):	Dat			]	Run	Start Stop		R1*			
Sequence ID/ Work Center I 130 *120* Packaging Packaging	D	Operation Description Identify as per dwg & Sto	ock Location:	Set Up/ Run Hours . 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp	( . DAS 26		
140 <b>*1 \( \) \( \) \( \)</b> QC  Quality Control		QC21- Final Inspection -	Work Order Release	0.00	-				L <u>J</u>	14-	oS-2	7	9-89		
								6	4	<u> </u>	126				

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DQA:			Date:									<b>TAART</b>			
						WORK ORDER NON-	-CC	ONFO	RMANCE / UF	PDATE	147	0 1		AEROSPACE	
QA Closed:			Date:				_				W	ork Order up	date only		
Work Orde	ar.					DISPOSITION		AGAINST DEPARTMENT/PROCESS							
WOIK OIG	-				_	Rework		Skid-tube Crosstube					Water Jet	Engineering	
Part No.				Scrap		1	Machining	Small Fab		Pro	d. Eng. Coor.	Quality			
Turcito.				Use-as-is			noforming	Finishing		Rec/Sto	re/Packaging	Other			
NCR No.			Suspected Unapproved			Large Fab	Composite			Supplier					
Root					Desc	ription of work order update	ı	nitial	Acti			Sign &	.,	001	
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descri	iption		Date	Verification	QC Inspector	
Design															
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Offset/Setup	$\vdash$														
Process							ļ								
Supplier	$\vdash$						l								
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Unapproved	Н			ĺ											
-	L		J	L	1		FA	ULT CA	regory						
Landi	ng G	iear	<del></del> ·			General		,		<u> </u>			_		
-		Bending				Bend		Folio/F	Program		L	Outside Dim	ensions	Pressure/Forced	
İ		Centre No	ot Concer	ntric		BOM/Route		Grain			$oxed{oxed}$	Over/Under	-	Set-up	
		Cracks				Broken/Damage/Defect		Hardwa	are		_	Part Incorre	F	Temperature/Cure	
		Crimp/Kii	nk/Ripple	/Wave		Burrs		4 '	ion Incomplete/Un			Part Lost/Mi	issing	Weld	
	Cuffs			Contamination		4	tions Incomplete/L	Inclear	<u></u>	Part Moved	L	Wrong Stock Pulled			
		Crushing				Countersink		-	gned/off center		$\vdash$	Positioned V		¬	
	Heat Treat		Cut Too Short	<u> </u>	Mislabe				Power Loss/	Surge	Other				
	Inspection Strip in Tube		Drawing	_	Misread										
	Marks/Chatter		Drill Holes	<u></u>	Off-set										
	Turning Sequence		Finish	Out of Calibration											
	Wave/Twist in Tube		Fit/Function		Out of	Sequence									

**Picklist Print** 

May-06-14 8:08:46 AM

Work Order ID: 118983

\*118983\*

Parent Item:

D3417-5

\*D3417-5\*

Parent Item Name: Washer

**Start Date:** 5/05/14

Required Date: 5/05/14

Page 1

**Start Qty: 24.00** 

Required Qty: 24.00

**Comments:** 

IPP Rev:ANew issue08-07-09 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MDELRINR1.2500		Purchased	No			110	f	24.0000	0.0296	0.74779			DAS
*MDFI RII DELRIN ROUND BAR 1.2		<b>)</b> 0*							**		1.00		40 9-89
				Location		Loc	<u>Oty</u>	Loc Code					14/05/2
				MAT			24						
:				<b>~</b> √⊘ <sup>m</sup>	128113		24		_	1,0			

DQA:			Date:										
						WORK ORDER NON-	-CC	ONFO	RMANCE / UPDATE				AEROSPACE
QA Closed:			Date:							W	ork Order up	odate only	
Work Orde	ır.					DISPOSITION			AGAINST				
VVOIROIGO	-' -					Rework			Skid-tube Crosstube			Water Jet Engineering	
Part N	Part No.				Scrap			Machining Small Fab	-	Pro	d. Eng. Coor.	Quality	
	-					Use-as-is			noforming Finishing		Rec/Sto	re/Packaging	Other
NCR N	١٥.					Suspected Unapproved			Large Fab Composite			Supplier	
			ŧ										
Root	1			,	Desci	ription of work order update		nitial	Action		Sign &		
Cause	_	Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Design						<b>v</b>							
Doc/Data	_												
Equip/Tooling													
Handling/Pre	$\dashv$	-											
Material		_			**								
Operator Offset/Setup		4											
Process											:		
Supplier	$\dashv$												
Training	$\dashv$		1										
Transport													
Unapproved													
							FAI	ULT CA	TEGORY				<u></u>
Landi	ng G	iear				General		•		_	•		<b>-</b>
		Bending				Bend		•	Program	_	Outside Dim	<del>-</del>	Pressure/Forced
		Centre No	ot Concer	ntric		BOM/Route	_	Grain		<u></u>	Over/Under	<u> </u>	Set-up
	$\overline{}$	Cracks				Broken/Damage/Defect	$oxed{oxed}$	Hardwa		$\vdash$	Part Incorre	<b></b>	Temperature/Cure
		Crimp/Kir	nk/Ripple	/Wave		Burrs	L	1 '	ion Incomplete/Unqualified	$\vdash$	Part Lost/M	issing	Weld
	$\vdash$	Cuffs				Contamination	$\vdash$	4	tions Incomplete/Unclear	-	Part Moved	L Mrong	Wrong Stock Pulled
	Crushing		$\vdash$	Countersink	$\vdash$	1	gned/off center		Positioned V Power Loss/	_	Other		
	Heat Treat		Cut Too Short Drawing	$\vdash$	Mislab			Jrowei Loss/	Juige _	Other			
	Inspection Strip in Tube  Marks/Chatter		Drill Holes	┢	Misread Off-set			-					
			Finish	Out of Calibration									
	Wave/Twist in Tube		Fit/Function	-	Out of Sequence					- <u>-</u>			

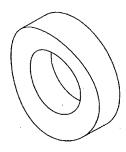
DART AEROSPACE LTD	Work Order:	118983
Description: Washer	Part Number:	D3417-5
Inspection Dwg: D3417 Rev: F		Page 1 of 1

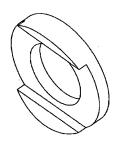
## FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø1.125	+0.030/-0.000	1, 145			VENN	PHO-12
Ø0.641	+0.008/-0.001	. 644			1.	, 1
0.120	+0.010/-0.000	.130	V		l i	
0.810	+0.010/-0.000	-814				• ,
0.251	+/-0.010	. 260	V		11	-1
R2.00	+/-0.030	2.0	V		Rad 6	
	·				-	
	,		ŕ			
					•	·
	DAG					

	DAS -				
Measured by:	9-09	Audited by:	DAS 25	Preliminary Approval:	
Date:	14/05/23	Date:	9-09 14-5-26	Date:	

Rev	Date	Change	Revised by	Approved
Α	09.05.04	New Issue	KJ/DD	
В	10.11.12	Dwg Rev updated	KJ , Oc	
С	12.07.31	Dwg Rev updated	KJ 🚓	[11]
				77







**D3417-1 WASHER** 

**D3417-3 WASHER** 

**D3417-5 WASHER** 

**D3417-7 WASHER** 

SHOP COPY RETURN TO

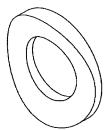
**ENGINEERING** 

UNCONTROLLED COPY

SUBJECT TO AMENDMENT

WITHOUT NOTICE

WORK ORDER 118983 MLJ 1405-07



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NOTES:

1) MATERIAL: BLACK DELRIN II 150E OR ACETRON GP ACETAL, ROD REF DART SPEC M-DELRIN-R
OR BLACK DELRIN II 150E OR ACETRON GP ACETAL, BAR REF DART SPEC M-DELRIN-B
OR BLACK DELRIN II 150E OR ACETRON GP ACETAL, SHEET REF DART SPEC M-DELRIN-S

2) FINISH: NONE
3) TOLERANCES: PER DART SPEC M-DELRIN-S
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.0417-1, 0.020 lbs
D3417-3, 0.010 lbs
D3417-7, 0.010 lbs
D3417-7, 0.010 lbs
D3417-9, 0.004 lbs

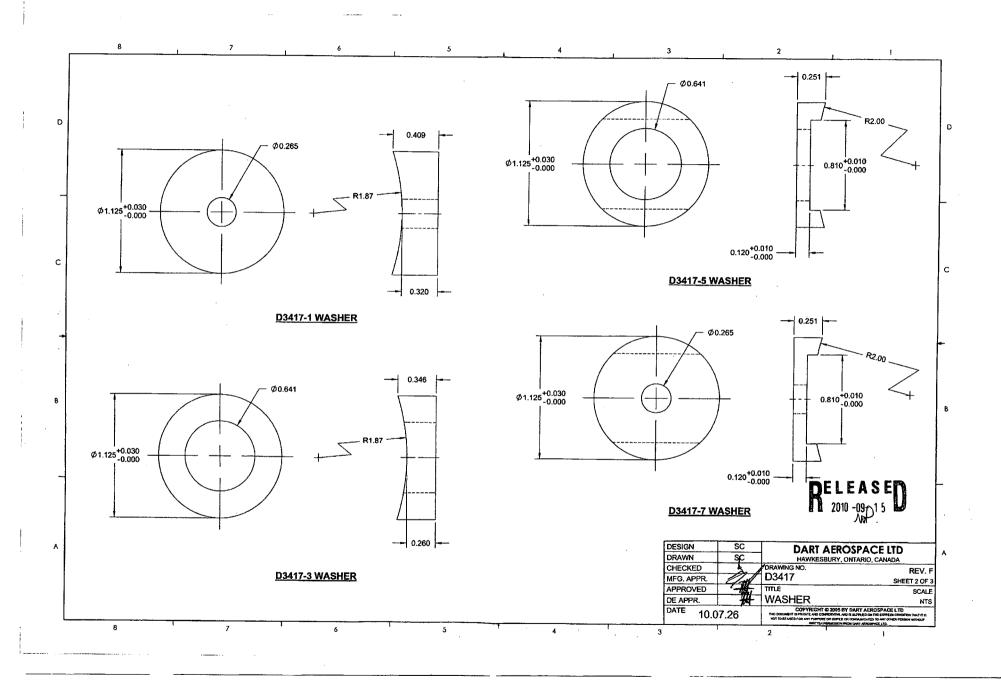
D3417-9, 0.004 lbs

**D3417-9 WASHER** 

ADD D3417-9 (ZN B5-3) 10.07.26 ADD D3417-7 (ZN A2-2) RF 09.06.30 ADD -5 WASHER (ZN B2-1, B2-2); REFORMAT TO "B" SIZE & UPDATE TO CURRENT STANDARDS; REASON: INSTALLATION OF NEW TOW RING AJS 08.07.08 REMOVE CBORE, WIDEN 05.06.30 В CHANGE TO ROUND WASHER PH 05.06.10 NEW ISSUE PH 05.03.31 REV. DESCRIPTION DATE

DESIGN	SC	DART AEROSPACE LTD					
DRAWN	SC.	HAWKESBURY, ON					
CHECKED	3/	DRAWING NO.	REV.				
MFG. APPR.		D3417	SHEET 1 OF				
APPROVED	7-111	TITLE	SCAL				
DE APPR.	⊥ <i>-#</i> (	WASHER	NT:				
DATE 10.0	17.26	COPYRIGHT @ 2005 BY DART AEROSPACE LTD					

10.07.26



0.181 Ø0.641 Ø1.125+0.030 -0.000 0.078 ---**D3417-9 WASHER** DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA
DRAWING NO.
D3417 SHEE DESIGN DRAWN CHECKED REV. F MFG. APPR.
APPROVED
DE APPR.
DATE 10. TITLE

WASHER

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TO COMMON ANY AND A PRIVATE OF THE COPY AND CONTROL OF THE COPY AND COPY SHEET 3 OF 3 10.07.26